

Storm Water Discharge Permits

Design Manual

Chapter 10

Roadside Development and Erosion Control

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In October 1990, the Environmental Protection Agency (EPA) approved the Final Storm Water Rule under the National Pollutant Discharge Elimination System (NPDES). Under this rule, qualified projects are required to have storm water discharge permits. The Iowa Department of Natural Resources (DNR) regulates these permits.

Templates for the various documents that need to be filled out for the permits can be accessed through the Office of Design shortcut; the templates are located in the Forms folder.

Qualified Projects

The DNR has defined a project as all the work done on a segment of roadway. This may include a number of contracts which are let separately, such as grading, paving, culverts and bridges, lighting, or erosion control. All of these separate contracts will be covered by the same permit.



The permits, along with a Pollution Prevention Plan, are required on any project that disturbs one acre (0.4 hectares) or more of soil.

The DNR defines disturbed soil as any soil that is exposed to erosive forces (wind or water). This definition includes projects like inlays and shoulder widening, as well as projects with a larger amount of earthwork and grading.

All projects that meet these criteria are required to have storm water discharge permits. In the Office of Design the permits should be turned in to the Methods Section at the Methods turn-in.

Permits

Figure 1 shows the flowchart for the storm water discharge permitting process. Each storm water discharge permit application will have 3 parts:

- *Notice of Intent for Storm Water Discharges Associated with Industrial Activity for Construction Activities*
- *Public Notice of Storm Water Discharge (fill out the Public Notice Template)*
- Pollution Prevention Plan

These are available in the StormwaterPermits folder located in W:\Highway\Design\Forms or from the Iowa DNR website. Electronic versions of the *Notice of Intent* and *Public Notice Template* permit forms are then placed in the Docs folder within the Design folder in the project directory located on the W drive (Districts should place these in their District Design folders). In the Office of Design, completed hardcopies of the *Notice of Intent* (with signature) and *Public Notice Template* permit forms are turned in with the project plans to the Methods Section. The Pollution Prevention Plan is included in the plans.

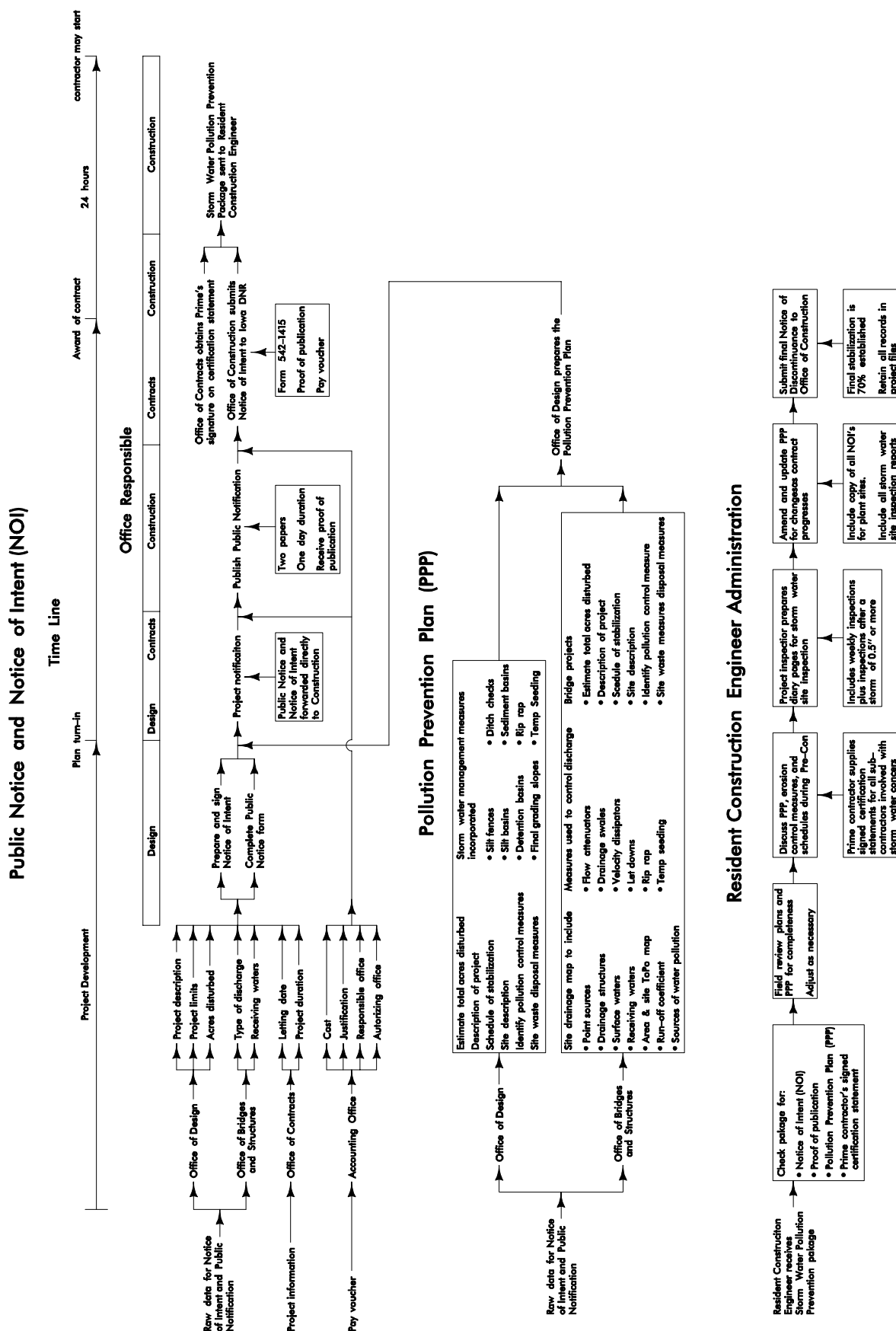


Figure 1: Storm water discharge permit flowchart.

Notice of Intent (NOI)

The *Notice of Intent for Storm Water Discharges Associated with Industrial Activity for Construction Activities* (General Permit No. 2) is the application to the DNR. It allows the DNR to monitor all the work being done in Iowa. Only one *Notice of Intent* form will be completed for each project even though there may be many contracts let within the project limits. The sample NOI at the end of this section demonstrates the information to be filled in by the Offices of Design and Construction.

Refer to the Pollution Prevention Plan section that follows for information on project description and receiving waters. The facility location should list the sections, townships, and ranges transected by the project, or for large projects the endpoints may be used. Include a verbal description from the production schedule or from the A.01 sheet of the plans. Use the letting date from the most current production schedule for the Timetable for Major Activities. Major activities would include grading, paving, final seeding, etc. This permit should be signed by the engineer who is in overall charge of the project's design. For in-house plans, the permit will be signed by the Design Projects Engineer. For projects designed by consultants, the permit will be signed by an engineer designated by the consulting firm as being in responsible charge of the design.

Public Notice of Storm Water Discharge

The *Public Notice of Storm Water Discharge* will be published in 2 newspapers for 1 day prior to starting work on the project. The publication of this public notice will be handled by the Office of Construction. Only one *Public Notice* form will be completed for each project even though there may be many contracts let within the project limits. An example of the Public Notice Template appears at the end of this section.

The number of discharge point sources shall be all points where a concentrated flow of water leaves the right-of-way within the project limits (such as rivers, streams, waterways, or sideroad ditches).

Pollution Prevention Plan (PPP)

Any project that disturbs one acre (0.4 hectares) or more requires a Pollution Prevention Plan (PPP). Because the PPP must be on the project work site at all times, it will be in the project plans. The same PPP must appear in all plans that occur within a project's limits. Therefore, when a PPP is developed for a grading project, the same PPP must appear in all related plans for paving, culverts, bridges, lighting, erosion control, etc. The PPP for each contract within the project's limits will show the disturbed area for the entire project as well as for that individual contract. Any questions concerning PPP's may be directed to the Office of Design's Roadside Development Section at (515) 239-1424. A sample PPP appears at the end of this section.

The Pollution Prevention Plan is located under Tabulation 110-12 or 110-12A in the quantity sheets (C sheets) in the project plans. Much of the information in the PPP is routine and is shown on the example PPP that has been included at the end of this section. The following information identifies the project specific information which the designer must determine.

Site Description

The site description should be very general to cover any extra work orders which may change the scope of work done.

Both the total acres and the disturbed acres need to be calculated. The total acres is calculated by multiplying the average right-of-way (ROW) width by the length of the project plus any extra acres for interchanges or borrows areas. For those contracts let separately, the designer must include the acres of all the contracts in the project limits.



Disturbed acres include any soil that will be exposed to erosive forces. Inlay areas, re-graded shoulders, and borrows should also be counted as disturbed acres, not just the acres to be seeded.

For example, the total acres and disturbed acres on the Pella bypass project, which was located in northern Marion County near the Mahaska County line, were:

$$\begin{aligned}\text{total acres} &= (\text{average ROW width} \times \text{length of project}) + \text{interchange areas} \\ &= (350' \times 30,256') + (2000' \times 800')(2.5 \text{ interchanges}) \\ &= 337 \text{ acres} \approx 350 \text{ acres}\end{aligned}$$

$$\begin{aligned}\text{disturbed acres} &= \text{area of new pavement} + \text{area of new granular shoulders} + \text{area to be seeded} \\ &= 42 \text{ acres} + 25 \text{ acres} + 255 \text{ acres} \\ &= 322 \text{ acres} \approx 325 \text{ acres}\end{aligned}$$

This same procedure is used for metric units.

Soil Associations

The soil association for the project area must be determined. The Principle Soil Associations of Iowa map (see Figure 2 on page 6) gives the soil associations for Iowa. If the project is on the borderline between two soil associations, list both associations.

Once the soil associations are determined, use Table 1 on page 7 to determine the hydrologic soil groups. An average hydrologic group must be estimated.

For example, the Pella bypass is located in two soil associations on the Principle Soil Associations of Iowa map. The map and Table 1 give the following soil associations and hydrologic groups.

Soil Association	Hydrologic Group
Clinton-Keswick-Lindley	B-C-C
Otley-Mahaska-Taintor	B-B-C/D

Use estimated Hydrologic Group C.

Soil Conservation Service (SCS) Runoff Curve Number

The estimated average SCS runoff curve number for the entire project after completion is determined by using Table 2 on page 7 and the average hydrologic soil group to get a weighted average based on various surface covers (paved surfaces, granular surfaces, etc.).

For example, the Pella Bypass has 337 total acres: 42 acres of paving, 25 acres of granular surfaces and the rest in rural seeding. This gives the following percentages:

$$\begin{aligned}\text{paved surfaces} &\rightarrow \frac{42 \text{ acres}}{337 \text{ acres}} = 12\% \\ \text{granular surfaces} &\rightarrow \frac{25 \text{ acres}}{337 \text{ acres}} = 7\% \\ \text{rural seeding} &\rightarrow 100\% - 12\% - 7\% = 81\%\end{aligned}$$

To calculate the average SCS runoff curve number, multiply each percentage by the runoff number from Table 2 for hydrologic group C.

$$\text{paved surfaces} \rightarrow 0.12 \times 98 = 11.8$$

$$\text{granular surfaces} \rightarrow 0.07 \times 89 = 6.2$$

$$\text{rural seeding} \rightarrow 0.81 \times 71 = 57.5$$

$$\text{average SCS runoff number} = 75.5 \approx 76$$

Use this same procedure for metric units.

Location of Storm Water Discharge Controls

Part of the Pollution Prevention Plan is the reference or inclusion of plans which show locations of typical slopes, ditch grades, and major structural and non-structural controls. These items are usually found on the plan and profile sheets of the project.

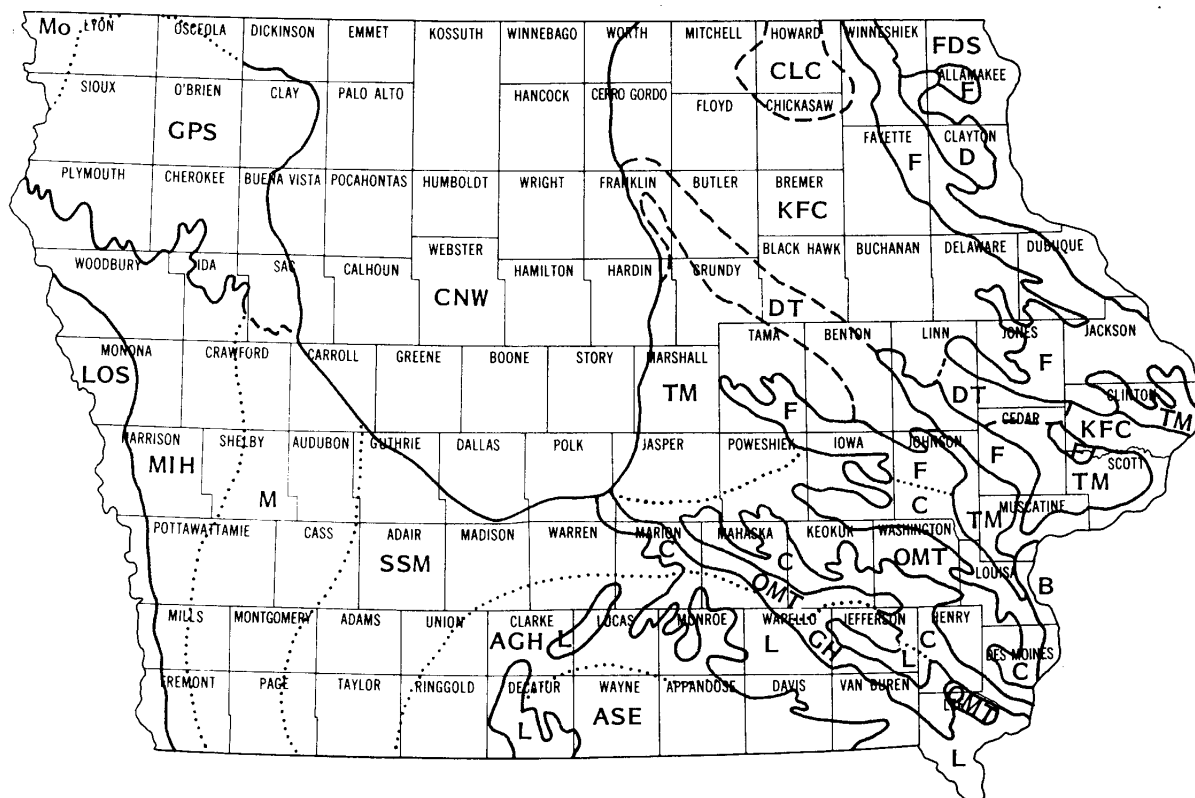
Some projects will not have plan and profile sheets, for example median foreslope flattening projects. In these cases, copies of old plan and profile sheets will be part of the Pollution Prevention Plan. Due to the number of these sheets, they will not be added to the project plans. Instead, they will be sent separately with the *Notice of Intent* and *Public Notice* permits to the Office of Contracts, which will forward them to the Resident Construction Engineer. These plan sheets should be clearly marked as a reference for the Pollution Prevention Plan.

Receiving Waterways

The first named waterway and the first named river which will be receiving runoff from the project need to be identified. These waterways may be found on large-size county maps or United States Geological Survey maps.

Controls

Site specific erosion-control practices and the contractor who is responsible must be listed in the Controls section of the Pollution Prevention Plan. For most projects, this can be easily done by making the appropriate corrections to the example Pollution Prevention Plan at the end of this section. All projects need to include the statement which says the project will be complete with the establishment of permanent perennial vegetation.



..... Gradational Boundary - - - - - Tentative Boundary ——— Abrupt Boundary

Figure 2: Principle Soil Associations of Iowa (map reprinted from Special Report No. 42, I.S.U. Cooperative Extension Service, 1965).

Soil Association			
AGH	Adair-Grundy-Haig	GH	Grundy-Haig
ASE	Adair-Seymour-Edina	KFC	Kenyon-Floyd-Clyde
B	Mississippi River Bottom Soils	L	Lindley-Keswick-Weller
C	Clinton-Keswick-Lindley	LOS	Luton-Onawa-Salix
CLC	Cresco-Lourdes-Clyde	M	Marshall
CNW	Clarion-Nicollet-Webster	MIH	Monona-Ida-Hamburg
D	Downs	Mo	Moody
DT	Dinsdale-Tama	OMT	Otley-Mahaska-Taintor
F	Fayette	SSM	Shelby-Sharpsburg-Macksburg
FDS	Fayette-Dubuque-Stonyland	TM	Tama-Muscatine
GPS	Galva-Primghar-Sac		

The information on the following tables was extracted from Technical Release 55, Urban Hydrology for Small Watersheds, revised in 1986 by the U.S. Soil Conservation Service.

Table 1: Soil Association Hydrologic Groups

Soil Association		Hydrologic Soil Group(s)
B	Soils of Mississippi River Bottomland	B/D
AGH	Adair - Grundy - Haig	C - C - C/D
ASE	Adair - Seymour - Edina	C - D - D
C	Clinton - Keswick - Lindley	B - C - C
CLC	Cresco - Lourdes - Clyde	C - C - B/D
CNW	Clarion - Nicollete - Webster	B - B - B/D
D	Downs	B
DT	Dinsdale - Tama	B - B
F	Fayette	B
FDS	Fayette - Dubuque - Stonyland	B - B - B
GPS	Galva - Primghar - Sac	B - B - B
GH	Grundy - Haig	C - C/D
KFC	Kenyon - Floyd - Clyde	B - B - B/D
L	Lindley - Keswick - Weller	C - C - C
LOS	Luton - Onowa - Salix	D - D - B
M	Marshall	B
MIH	Monona - Ida - Hamburg	B - B - B
Mo	Moody	B
OMT	Otley - Mahaska - Taintor	B - B - C/D
SSM	Shelby - Sharpsburg - Macksburg	B - B - B
TM	Tama - Muscatine	B - B

Table 2: SCS Runoff Curve Numbers

Cover Description	Curve Numbers for Hydrologic Soil Group			
	A	B	C	D
Paved Surfaces	98	98	98	98
Granular Surfaces	76	85	89	91
Earth Shoulders	39	61	74	80
Urban Seeding	39	61	74	80
Rural Seeding	30	58	71	78

Sample Notice of Intent

Cashier's Use Only
17-1736 -

No. 1 FOR "STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY"

No. 2 FOR "STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FOR CONSTRUCTION ACTIVITIES"

No. 3 FOR "STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM ASPHALT PLANTS, CONCRETE BATCH PLANTS, ROCK CRUSHING PLANTS, AND CONSTRUCTION SAND AND GRAVEL FACILITIES."

PERMIT INFORMATION

Has this storm water discharge been previously permitted (Check One) ☐ Yes ☒ No.

If yes, please list authorization number _____

Under what General Permit are you applying for coverage?

General Permit No. 1 ☐ General Permit No. 2 ☒ General Permit No. 3 ☐

NPDES PERMIT FEE OPTIONS

For coverage under the NPDES General Permit the following fees apply:
☐ Annual Permit Fee \$150 (per year) Maximum coverage is one year.
☐ 3-year Permit Fee \$300 Maximum coverage is 3 years.
☐ 4-year Permit Fee \$450 Maximum coverage is 4 years.
☐ 5-year Permit Fee \$600 Maximum coverage is 5 years.
Coverage provided by multi-year permit fees expires no later than the expiration date of the general permit (October 1, 2007).
Checks should be made payable to: Iowa Department of Natural Resources.

FACILITY OR PROJECT INFORMATION

Enter the name and full address/location (not mailing address) of the facility or project for which permit coverage is requested.

NAME: DOT project number(s) _____

CITY: Nearest city _____ COUNTY: County _____ STATE: IA _____ ZIP CODE: Enter, or may leave blank _____

CONTACT INFORMATION. Give name, mailing address and telephone number of a contact person (Attach additional information on separate pages as needed). This will be the address to which all correspondence will be sent and to which all questions regarding your application will be directed.

NAME: _____ ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____ TELEPHONE: () _____

Check the appropriate box to indicate the legal status of the operator of the facility.
☐ Federal ☒ State ☐ Public ☐ Private ☐ Other (specify) _____

SIC CODE* (General Permit No. 1 & 3 Applicants Only) _____

* SIC code refers to Standard Industrial Classification code number used to classify establishments by type of economic activity.

FACILITY LOCATION OR LOCATION OF CONSTRUCTION SITE

Give the location by 1/4 section location (i.e. NW 1/4 section number/township/range).

1/4 SECTION	SECTION	TOWNSHIP	RANGE

OWNER INFORMATION

Enter the name and full address of the owner of the facility.

NAME: Iowa Department of Transportation Office of Construction

CITY: Ames

STATE: IA

ZIP CODE: 50010

TELEPHONE: (616) 239-1280

MAIL TO:

STORMWATER COORDINATOR
IOWA DEPARTMENT OF
NATURAL RESOURCES
502 E. 9TH STREET
DES MOINES, IA 50319-0034

OUTFALL INFORMATION

Discharge Start Date, i.e., when did/will the site begin operation or 10/1/92, whichever is later: Typically, month of letting

Is any storm water monitoring information available describing the concentration of pollutants in storm water discharges? ☐ Yes ☒ No.

NOTE: Do not attach any storm water pollutant information as part of this Notice of Intent.

Receiving Water(s) to the first uniquely named waterway in Iowa, e.g., road ditch to unnamed tributary to Mud Creek to South Skunk River:

Compliance With The Following Conditions:

1. Has the pollution prevention plan been developed prior to the submittal of this Notice of Intent? ☒ Yes ☐ No

2. Will the Storm Water Pollution Prevention Plan comply with approved State (Section 467A.64, Code of Iowa) or local sediment and erosion plans? (for General Permit 2 only) ☒ Yes ☐ No

3. Have two (2) public notices been published for at least one day, one each in the two newspapers with the largest circulation in the area where the discharge is located? (new applications only) ☒ Yes ☐ No

GENERAL PERMIT NO. 2 AND GENERAL PERMIT NO. 3 APPLICANTS COMPLETE THIS SECTION.

Description of Project: _____

For General Permit No. 3 - Is this facility to be moved this year? ☐ Yes ☒ No

Number of Acres of Disturbed Soil: _____ Fill this in (Construction Activities Only)

Estimated time table for activities / projects, i.e., approximately when did/will the project begin and end: _____

From current production schedule: grading, paving, or permanent erosion control letting date

CERTIFICATION

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified people properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, this information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME (please print) _____ TITLE: _____

Engineer who is in overall charge of the project

SIGNATURE: _____ DATE: _____

Handwritten signature (on permit to be turned in to Office of Construction)

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Cashier's Use Only
17-1736 -

No. 1 FOR "STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY"

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No. 3 FOR "STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM ASPHALT PLANTS, CONCRETE BATCH PLANTS, ROCK CRUSHING PLANTS, AND CONSTRUCTION SAND AND GRAVEL FACILITIES."

PERMIT INFORMATION

Has this storm water discharge been previously permitted (Check One) ☐ Yes ☒ No.

If yes, please list authorization number _____

Under what General Permit are you applying for coverage?

General Permit No. 1 ☐ General Permit No. 2 ☒ General Permit No. 3 ☐

NPDES PERMIT FEE OPTIONS

For coverage under the NPDES General Permit the following fees apply:
☐ Annual Permit Fee \$150 (per year) Maximum coverage is one year.
☐ 3-year Permit Fee \$300 Maximum coverage is 3 years.
☐ 4-year Permit Fee \$450 Maximum coverage is 4 years.
☐ 5-year Permit Fee \$600 Maximum coverage is 5 years.
Coverage provided by multi-year permit fees expires no later than the expiration date of the general permit (October 1, 2007).
Checks should be made payable to: Iowa Department of Natural Resources.

FACILITY OR PROJECT INFORMATION

Enter the name and full address/location (not mailing address) of the facility or project for which permit coverage is requested.

NAME: DOT project number(s) _____

CITY: Nearest city _____ COUNTY: County _____ STATE: IA _____ ZIP CODE: Enter, or may leave blank _____

CONTACT INFORMATION. Give name, mailing address and telephone number of a contact person (Attach additional information on separate pages as needed). This will be the address to which all correspondence will be sent and to which all questions regarding your application will be directed.

NAME: _____ ADDRESS: _____

CITY: _____ STATE: _____ ZIP CODE: _____ TELEPHONE: () _____

Check the appropriate box to indicate the legal status of the operator of the facility.
☐ Federal ☒ State ☐ Public ☐ Private ☐ Other (specify) _____

SIC CODE* (General Permit No. 1 & 3 Applicants Only) _____

* SIC code refers to Standard Industrial Classification code number used to classify establishments by type of economic activity.

FACILITY LOCATION OR LOCATION OF CONSTRUCTION SITE

Give the location by 1/4 section location (i.e. NW 1/4 section number/township/range).

1/4 SECTION	SECTION	TOWNSHIP	RANGE

OWNER INFORMATION

Enter the name and full address of the owner of the facility.

NAME: Iowa Department of Transportation Office of Construction

CITY: Ames

STATE: IA

ZIP CODE: 50010

TELEPHONE: (616) 239-1280

MAIL TO:

STORMWATER COORDINATOR
IOWA DEPARTMENT OF
NATURAL RESOURCES
502 E. 9TH STREET
DES MOINES, IA 50319-0034

OUTFALL INFORMATION

Discharge Start Date, i.e., when did/will the site begin operation or 10/1/92, whichever is later: Typically, month of letting

Is any storm water monitoring information available describing the concentration of pollutants in storm water discharges? ☐ Yes ☒ No.

NOTE: Do not attach any storm water pollutant information as part of this Notice of Intent.

Receiving Water(s) to the first uniquely named waterway in Iowa, e.g., road ditch to unnamed tributary to Mud Creek to South Skunk River:

Compliance With The Following Conditions:

1. Has the pollution prevention plan been developed prior to the submittal of this Notice of Intent? ☒ Yes ☐ No

2. Will the Storm Water Pollution Prevention Plan comply with approved State (Section 467A.64, Code of Iowa) or local sediment and erosion plans? (for General Permit 2 only) ☒ Yes ☐ No

3. Have two (2) public notices been published for at least one day, one each in the two newspapers with the largest circulation in the area where the discharge is located? (new applications only) ☒ Yes ☐ No

GENERAL PERMIT NO. 2 AND GENERAL PERMIT NO. 3 APPLICANTS COMPLETE THIS SECTION.

Description of Project: _____

For General Permit No. 3 - Is this facility to be moved this year? ☐ Yes ☒ No

Number of Acres of Disturbed Soil: _____ Fill this in (Construction Activities Only)

Estimated time table for activities / projects, i.e., approximately when did/will the project begin and end: _____

From current production schedule: grading, paving, or permanent erosion control letting date

CERTIFICATION

I certify under penalty of law that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified people properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, this information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME (please print) _____ TITLE: _____

Engineer who is in overall charge of the project

SIGNATURE: _____ DATE: _____

Handwritten signature (on permit to be turned in to Office of Construction)

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Public Notice Template

County: _____
DOT Projects(s): _____
Letting: _____

Date Sent: (Office of Construction will fill in.)

Send to : **email:** Support@cnaads
 CAN (Customized Newspaper Advertising)
Phone: (800) 227-7636 Ext. 123 **Fax:** (515) 244-4855

For Newspapers

1. (Office of Construction will fill in.)
2. (Office of Construction will fill in.)

Please publish the following text as a legal notice in the next issue and run for one day only. (If the newspaper does not publish a legal section, please print as a public notice in the classified section.)

PUBLIC NOTICE OF STORM WATER DISCHARGE

The Iowa Department of Transportation plans to submit a Notice of Intent to the Iowa Department of Natural Resources to be covered under National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 "Storm Water Discharge Associated with Industrial Activity for Construction Activities."

The storm water discharge will be from highway construction activity located in _____ County on _____ Highway _____. The project is _____.

(Choose One) The Public Land Survey location is Township _____, Range _____, Section(s) _____. **(Or)** The Public Lands Survey location is from Township _____, Range _____, Sections(s) _____ to Township _____, Range _____, Section(s) _____.

Stormwater will be discharged from _____ point sources and will be discharged to the following streams: _____.

Comments may be submitted to the Storm Water Discharge Coordinator, IOWA DEPARTMENT OF NATURAL RESOURCES, Environmental Protection Division, 502 East 9th Street, Des Moines, IA 50319-0034. The public may review the Notice of Intent from 8:00 a.m. to 4:30 p.m. Monday through Friday at the above address after it has been received by the Department.

Example Pollution Prevention Plan

POLLUTION PREVENTION PLAN		110-12A
<p>All contractors/subcontractors shall conduct their operations in a manner that minimizes erosion and prevents sediments from leaving the highway right-of-way. The prime contractor shall be responsible for compliance and implementation of the Pollution Prevention Plan (PPP) for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.</p>		
1.	<p>SITE DESCRIPTION</p> <p>This Pollution Prevention Plan (PPP) is for the construction of a four-lane facility on Ia 163 in Marion County around the south side of Pella.</p> <p>This PPP covers approximately 350 acres with an estimated 325 acres being disturbed. The portion of the PPP covered by this contract has 325 acres disturbed.</p> <p>The PPP is located in an area of two soil associations (Clinton-Keswick-Lindley and Otley-Mahaska-Taintor). The estimated average SCS runoff curve number for this PPP after completion will be 76.</p> <p>Refer to the grading plan (Marion County NHS-163-3(7)--19-63) for locations of typical slopes, ditchgrades, and major structural and non-structural controls. A copy of this plan will be on file at the project engineer's office. Runoff from this work will flow into various unnamed ditches and waterways which flow into Muchaknock Creek and the Des Moines River. Muchaknock Creek is a tributary of the Des Moines River.</p> <p>POTENTIAL SOURCES OF POLLUTION:</p> <p>Site sources of pollution generated as a result of this work relate to silts and sediment which may be transported as a result of a storm event. However, this PPP provides conveyance for other (non-project related) operations. These other operations have storm water runoff, the regulation of which is beyond the control of this PPP. Potentially this runoff can contain various pollutants related to site-specific land uses. Examples are:</p> <p>Rural Agricultural Activities: Runoff from agricultural land use can potentially contain chemicals including herbicides, pesticides, fungicides and fertilizers.</p> <p>Commercial and Industrial Activities: Runoff from commercial, industrial, and commerce land use may contain constituents associated with the specific operation. Such operations are subject to potential leaks and spills which could be commingled with run-off from the facility. Pollutants associated with commercial and industrial activities are not readily available since they are typically proprietary.</p>	
2.	<p>CONTROLS</p> <p>At locations where runoff can move offsite, silt fence shall be placed along the perimeter of the areas to be disturbed prior to beginning grading, excavation or clearing and grubbing operations. Vegetation in areas not needed for construction shall be preserved. As areas reach their final grade, additional silt fences, silt basins, intercepting ditches, sod flumes, letdowns, bridge end drains, and earth dikes shall be installed as specified in the plans and/or as required by the project engineer. This will include using silt fence as ditch checks and to protect intakes. Temporary stabilizing seeding shall be completed as the disturbed areas are constructed. If construction activity is not planned to occur in a disturbed area for at least 21 days, the area shall be stabilized by temporary seeding or mulching within 14 days. Other Stabilizing methods shall be used outside the seeding time period.</p> <p>This work shall be done in accordance with Section 2602 of the Standard Specification. If the work involved is not applicable to any contract items, the work shall be paid for according to Article 1109.03 paragraph B.</p> <p>As the work progresses, additional erosion control items may be required as determined by the contractor after field investigation. The contractor will complete the construction with the establishment of permanent perennial vegetation of all disturbed areas.</p>	
3.	<p>OTHER CONTROLS</p> <p>Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.</p> <p>APPROVED STATE OR LOCAL PLANS:</p> <p>During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.</p>	
4.	<p>MAINTENANCE</p> <p>The contractor is required to maintain all temporary erosion control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. Cleaning of silt control devices shall begin when the features have lost 50% of their capacity.</p>	
5.	<p>INSPECTIONS</p> <p>Inspections shall be made jointly by the contractor and the contracting authority every seven calendar days and after each rain event that is ½" or greater. The contractor shall immediately begin corrective action on all deficiencies found. The findings of this inspection shall be recorded in the project diary. This PPP may be revised based on the findings of the inspection. The contractor shall implement all revisions. All corrective actions shall be completed within 3 calendar days of the inspection.</p>	
6.	<p>NON-STORM DISCHARGES</p> <p>This includes subsurface drains (i.e. longitudinal and standard subdrains), slope drains and bridge end drains. The velocity of the discharge from these features may be controlled by the use of patio blocks, Class A stone or erosion stone.</p>	